A Mare Owner's Countdown to Breeding

The 2007 breeding season has come to a close. However, for mare owners, it isn't too soon to start thinking about next year. Planning ahead can make breeding your mare less stressful and more fruitful. Many broodmare owners can run through breeding programs in their sleep, but for those new at the game the following may be helpful in demystifying the process of breeding your mare.

Greater than two months before breeding:

Discuss with your veterinarian the pros and cons of breeding your mare. There are many things to consider. How is your mare's general health? Healthy mares that are not over or underweight tend to be most fertile. How old is your mare? Does she have any congenital problems that you would not want to pass on? Because of love they feel for their mare, many people overlook the consequences of breeding mares with undesirable heritable traits. Is she reproductively sound? A breeding soundness exam can help evaluate the reproductive health of your mare. If done early, it can help by identifying problems that may need treatment before you are trying to breed.

During this time you may also want to research prospective stallions. You will want to establish a breeding contract ahead of time with the stallion owner. This is a time for you to familiarize yourself with the details of the contract. You may want to ask about the pregnancy rates of the stallion, the fees you will incur during the process, the collection days, and breeding season.

Which stallion you choose may effect how your mare will be bred. Mares are bred by natural cover or by artificial insemination (AI). If your mare is to be bred by natural cover, you will probably transport your mare to the stallion for breeding. If she is to be bred by AI and the stallion ships well, it is possible for her to be bred with transported semen. Transported semen comes in one of two forms: cooled or frozen. There are advantages and disadvantages to each method. Pregnancy rates are highest in mares bred by live cover or artificially inseminated immediately after collection. However, transporting the mare to the
stallion may not be practical or desirable. In most cases cooled semen has higher pregnancy rates than frozen semen but cooled semen must be ordered and shipped for each breeding. Depending on the collection schedule and shipping methods offered by the stallion owner, this can be difficult to orchestrate with the actual ovulation of the mare. Frozen semen is nice because it sits in the tank waiting for the mare but the conception rates are lower and the timing must be more precise so the mares need to be checked more frequently by a veterinarian. Breed registries have differing rules regarding AI and transported semen. If you intend to register your foal, you should check the rules of your specific breed association.

**Two months before breeding:**

Mares are seasonal breeders. They cycle, produce and release ova from follicles, during the months with the longest day length. During the winter they enter a period of diestrus and stop cycling. As mares begin to cycle in the early spring, they enter a period of transition. During this time the mares may show signs of being in heat but their cycles tend to be unpredictable making it difficult to achieve good pregnancy rates during this time. Without any intervention the ideal time to breed mares in the northern hemisphere is May through August. During this stretch of time, the mares are usually cycling consistently and are most fertile.

The length of gestation is extremely variable but pregnancy usually lasts about 340 days. For many breeds the foals have an automatic birthday of January 1st. Foals destined for age group competitions will have an advantage if they have an actual birth date early in the year. For owners hoping for birthdays early in the calendar year, May through August is usually considered too late to be acceptable breeding dates. The simplest and most effective method to get a mare to cycle earlier in the year, is to increase her "day length" 60 days before you want her to start cycling. For most mares this means adding light to their stall starting on December 1st. The most common method is to add light at the end of the day before dusk making the mare's day length 15-16 hours/day. This can be most easily achieved by placing the lights on timers to light the stall from around 4:30 pm to 10-11pm each day. Leaving the lights on all night or skipping days will negate the effect. The lights do not have to be overly bright. The rule of thumb is that you should be able to comfortably read a newspaper.

**One month before breeding:**

If possible, start teasing your mare to determine her heat cycle. Mares that are in estrus (heat) usually stand calmly, squat and wink the labia of the vulva in the presence of a stallion. They often raise their tail and urinate. Mares that are not in estrus tend to be more agitated in the presence of a stallion. They are restless and may lay their ears back, squeal and kick. Some mares will tease to geldings or other mares when they are in heat. Other mares will not overtly show signs of estrus even when teased with a stallion. Many mares with foals are so protective of the foals that they won't show estrus behavior. Teasing is not
always possible. Your veterinarian can determine the stage of estrus by examination of the ovaries, uterus and cervix of the mare.

If your mare is to be bred with transported semen, contact your veterinarian to determine when they would like to start following your mare’s cycle. If your mare is going to travel to the stallion farm, contact the breeding manager or stallion owner to determine when they would like you to bring your mare. If your mare is to travel out of state, be sure to check with your veterinarian about the timing and requirements for an interstate health certificate and coggins testing for the state in question.

**Desired breeding time:**

Arrange for breeding either by your veterinarian or the stallion manager. The attending veterinarian will probably want to check your mare after breeding to ensure that she has ovulated and that she did not acquire any post breeding fluid within her uterus. Even with the use of drugs to induce ovulation, some mares do not ovulate when expected. If this is noted on a post-breeding exam, there may be a chance to order more semen. Many mares, especially older mares, will have difficulty clearing fluid from their uterus after breeding. If this happens, it can provide an inhospitable environment for the embryo and the pregnancy will be lost prior to implantation. Oxytocin with or without uterine lavage can greatly increase the chances of a viable pregnancy.

**Pregnancy exams:**

Pregnancy can usually be diagnosed by ultrasound 14 days after ovulation. A fetal heartbeat can usually be detected ultrasonographically at day 24 or beyond. At the heartbeat check be sure to discuss with your veterinarian protocols for vaccination (most veterinarians recommend EHV-4 vaccination at 5, 7, and 9 months of gestation as well as core vaccinations 1 month prior to foaling). Specific recommendations may vary between veterinarians or by region.

It is very nice when everything goes as planned. You find a stallion, your mare comes into heat, she is bred in a timely fashion and she takes the first time. This does happen sometimes. However, like it or not, mares are individuals and they don't always come into heat when you expect them to, ovulate when they should, or they have trouble with post breeding fluid. Sometimes the semen misses the connecting flight or the stallion is collected Monday, Wednesday and Friday and they only ship FedEx and you really need the semen on Monday and you are out of luck.

Generally the most effective tool in a successful breeding season is good communication. If you have all of your questions answered ahead of time by your
veterinarian and by the stallion manager and you are kept up to date as the process unfolds you shouldn't have too many surprises.

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